

**NOTE TO PTO PERSONNEL:**  
**THIS PATENT APPLICATION IS BEING**  
**FILED WITH SMALL ENTITY STATUS**

# MOBILE REMOTE BURGLARPROOF LEARNING SYSTEM

## BACKGROUND OF THE INVENTION

### 1. Field of the invention

The present invention relates to an intelligent learning determining system,  
5 and more particularly to a remote control device having code learning function  
and code wash function, in which when setting a new code, the old code is cleared  
after the new code is confirmed.

### 2. DESCRIPTION OF THE PRIOR ART

The program design of the code setting circuit in a common burglarproof  
10 device is First in First out. When setting codes, the codes can be stored in the  
memory according to the sequence of the learning code, so that one car can be  
controlled by plural remote control devices at the same time.

However, the operating method described above has many disadvantages.  
For example, when the car owner hands over his car to other people (such as a  
15 parking guy or a car maintenance worker), it is easy to add a code if an evildoer  
tries to obtain the car. The method to add a code is to let the burglarproof device  
into learning state and set the code in the host. The host can store the codes in  
the memory in sequence according to the First in First out manner. Therefore,  
the host can receive new and illegal codes while the car owner may not observe.

20 Therefore, the device of the prior art has many defects. So it is not a good  
design and should be improved.

Because of the above described disadvantages generated from the  
burglarproof device of the prior art, the applicant keeps on carving unflaggingly to  
develop the intelligent learning determining system of the present invention

through wholehearted experience and research.

## **SUMMARY OF THE INVENTION**

It is an object of the present invention to provide an intelligent learning determining system to prevent the lost of the emitting part device or prevent an evildoer from setting another code in the host, so as to decrease the rate of car-lost. When the above condition is happened, the user can reset a code of the remote control device of the car, and the lost code or the code set by the evildoer can be clearly completely.

It is another object of the present invention to provide an intelligent learning determining system to be used by the car consignee. The car is installed a burglarproof device when it is not sold. But for the convenience to manage, display and provide for the customer to test the car, the burglarproof devices of all cars are set and learned a master code used only by the consignee. Therefore, the sales of the consignee can relieve the burglarproof system of the cars by a specific emitter so as to rapidly display cars and provide cars for the customer to test according to the customer's requests. Once the customer chooses the car he wants to buy, the car can re-learn a user code and delete the master code used by the consignee automatically. Using such device, rapid service can be achieved and the burglarproof system is safe and reliable.

It is an additional object of the present invention to provide an intelligent learning determining system in which a new code is stored in a register and the memory host will not replace the old code by the new code immediately so as to avoid that the new code is unfit or the learning process is not complete or is interfered. The old codes are deleted after the new code is confirmed by the host to sure it is usable. In addition, it is allowable to re-learn a new code.

It is a further object of the present invention to provide an intelligent learning determining system in which a warning device is set in the receiving part for providing the operating process to the user so as to avoid that the new code is unfit or the learning process is not complete or is interfered. The warning device  
5 can be a buzzer or a light emitting diode (LED).

The intelligent learning determining system having above-described advantages includes a receiving part and an emitting part. The receiving part at least includes a micro-controller, a memory, a register, a control circuit and a receiving circuit. The emitting part at least includes a code circuit and an  
10 emitting interface circuit. Using the above device under learning mode, a control host can be corresponding to plural remote control devices by an intelligent type of repeatable code setting, and when a new code is set, only after the new code is confirmed, all old codes are cleared to achieve code wash function.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

15 The drawings disclose an illustrative embodiment of the present invention which serves to exemplify the various advantages and objects hereof, and are as follows:

Fig. 1 is a block diagram of the intelligent learning determining system according to a preferred embodiment of the present invention;

20 Fig. 2 is a flowchart of the setting actions of the intelligent learning determining system;

Fig. 3 is a setting flowchart of a master code used by the consignee of intelligent learning determining system; and

25 Fig. 4 is a setting flowchart of a user code of intelligent learning determining system

## **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

The present invention will become more clearly by the following detailed description.

5       The operating method of the remote control device of the present invention is described as following steps:

- a) providing a recognition code in a central control unit of a memory host in a car having burglarproof function to filter an emitting device of a different group, wherein a memory circuit is ready for storing a reading code in a memory device;
- 10       b) checking if a receiving recognition code is right when code learning function of said host is turned on by an emitting device of the same group in an effective range of said host under code leaning mode, and then transmitting a new code to a register of said host, and
- c) determining said new code is a master code or a user code and if it is
- 15       inputted in the first time, and then clearing a memory and storing said new code in said memory to replace an old code and achieve code wash function.

Please refer to Fig. 1. The intelligent learning determining system of the present invention includes a receiving part 10 and an emitting part 20. The receiving part 10 at least includes a micro-controller 11, a memory 12, a register

20   13, a control circuit 14 and a receiving circuit 15. The emitting part 20 at least includes a code circuit 21 and an emitting interface circuit 22. Using the above device under learning mode, a control host can be corresponding to plural remote control devices by an intelligent type of repeatable code setting, and when a new code is set, all old codes are cleared after the new code is confirmed. Then the

25   user can set the codes of other remote control devices sequentially.

When the code circuit 21 of the emitting part 20 sends a code via any

output type, the receiving part 10 receives the code by the receiving circuit 15. The received code has two kinds: one is a recognition code and the other is a user code or a master code. The recognition code must be checked at first, and next steps can go on when the recognition code is right. The code is processed by the  
5 micro-controller 11 and the control circuit 14, which test and control an external circuit, and is reminded by twinkling of a car lamp or a warning system, then the new code is stored and all old codes are cleared to achieve code wash function and effectively prevent an evildoer from committing a crime by high-tech products. Therefore, it is necessary to prevent the system from being invaded by the  
10 aforesaid code wash function when the car is handed over to other people (such as a parking guy or a car maintenance worker).

Please refer to Fig. 2 showing a general setting and operating flowchart. The user must operate the remote control device in the effective distance of the car. When the user pushes the button, the receiving part starts to check if the  
15 recognition code is right and filter the emitting device of the same group. If the recognition code is wrong, the control host of the receiving part will not work. If the recognition code is right, the micro-controller will determine the code is a master code or a user code. The above two codes cannot exist in the control host at the same time, which can be achieved by simple program design.

20 Please refer to Fig. 3. When a master code is determined after the flowchart of Fig. 2, the micro-controller will determine if it is used at the first time. If it is used at the first time, the memory is cleared first, and then the master code is stored in the memory. If it is not used at the first time, the micro-controller will determine if there is a previous user code in the memory. If there  
25 is a previous user code in the memory, all old codes are cleared and the new master code is stored in the memory. If not, the new master code is directly stored in the memory.

Please refer to Fig. 4. When a user code is determined after the flowchart of Fig. 2, the micro-controller will determine if it is used at the first time. If it is used at the first time, the memory is cleared first, and then the user code is stored in the memory. If it is not used at the first time, the micro-controller will  
5 determine if there is a previous master code in the memory. If there is a previous master code name in the memory, all old codes are cleared and the new user code is stored in the memory. If not, the new user code is directly stored in the memory. Afterward, the user can set the codes of other remote control devices sequentially to backup or for the use of his family.

10 The intelligent learning determining system provided by the present invention has following advantages when compared with other prior art:

1. It can prevent the lost of the emitting part device or prevent an evildoer from setting another code, so as to decrease the rate of car-lost. When the user finds that the original usable code becomes unusable, it may because the evildoer  
15 clears the original usable code and sets another code so that the original code becomes unusable. In the meantime, the user can reset a correct user code to clear other code.

2. For preventing the negligence of the user, the present invention provides a negligence-preventing device which adds code learning function and code  
20 wash function. Bt re-learning the code of the remote control device of the car, the lost code or the code set by the evildoer can be clearly completely.

Many changes and modifications in the above described embodiment of the invention can, of course, be carried out without departing from the scope thereof. Accordingly, to promote the progress in science and the useful arts, the invention  
25 is disclosed and is intended to be limited only by the scope of the appended claims.